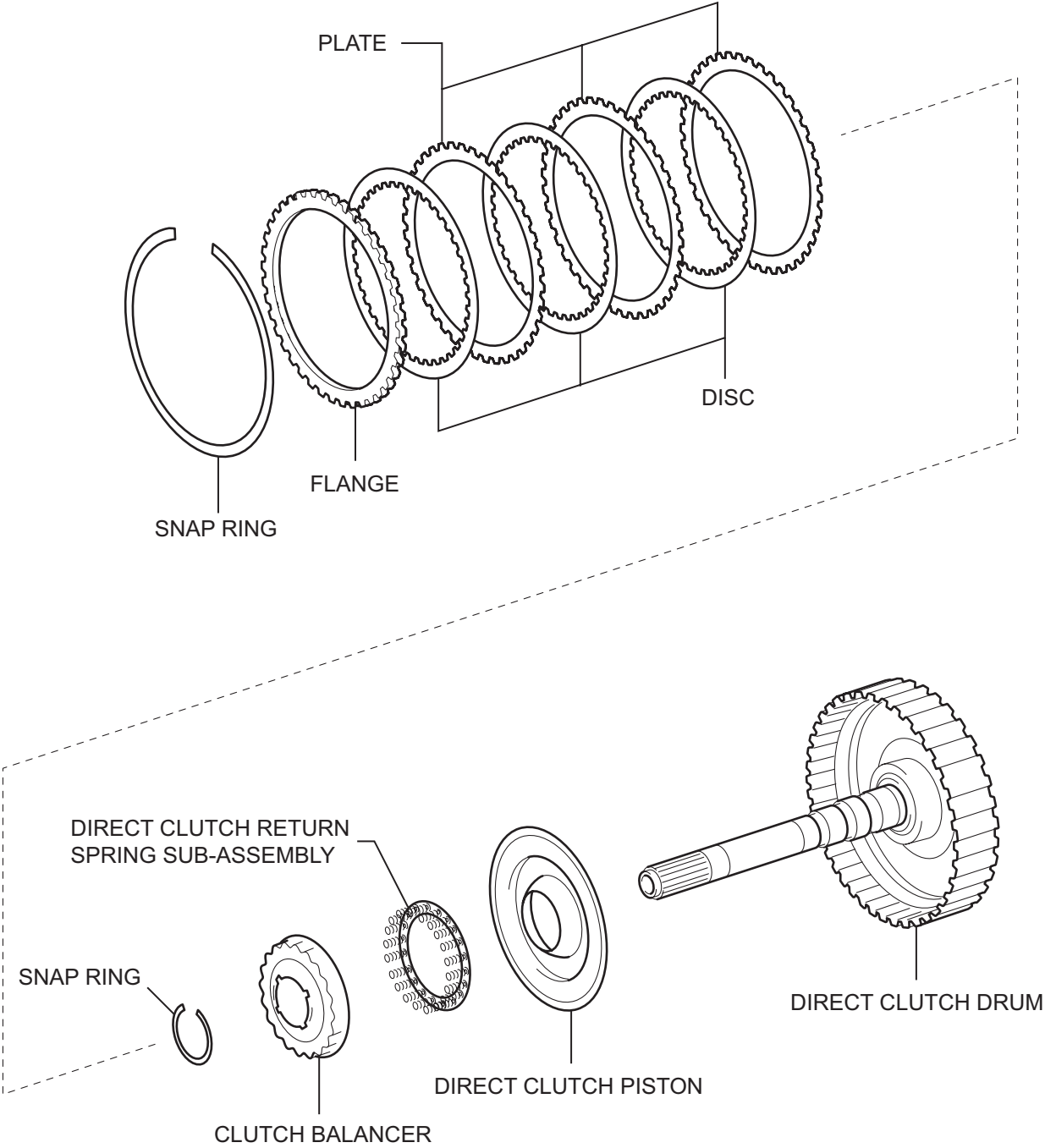


# DIRECT CLUTCH

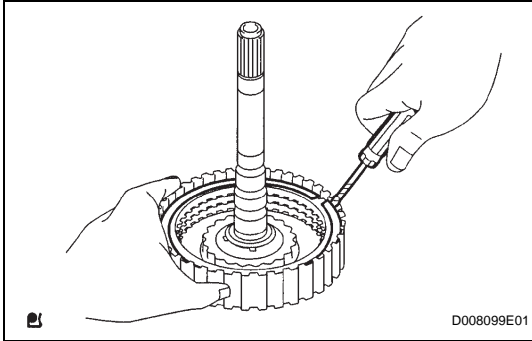
## COMPONENTS

AX

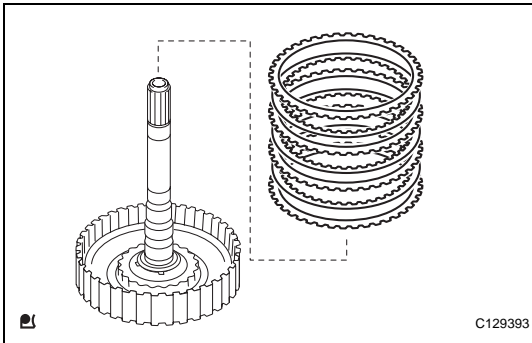


## DISASSEMBLY

### 1. INSPECT PACK CLEARANCE OF DIRECT CLUTCH (See page AX-234)

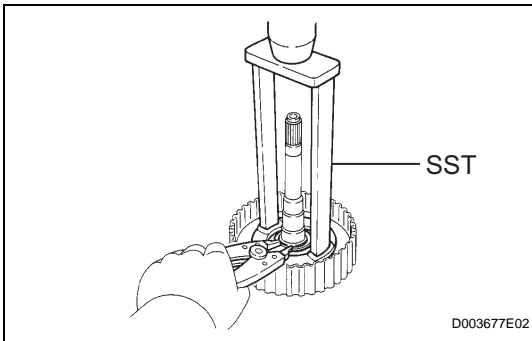


### 2. REMOVE DIRECT MULTIPLE DISC CLUTCH DISC (a) Using a screwdriver, pry out the snap ring from the direct clutch drum.



(b) Remove the flange, 3 discs and 3 plates from the direct clutch drum.

### 3. INSPECT DIRECT MULTIPLE DISC CLUTCH DISC (See page AX-234)



### 4. REMOVE DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY

(a) Place SST on the clutch balancer and compress the spring with a press.

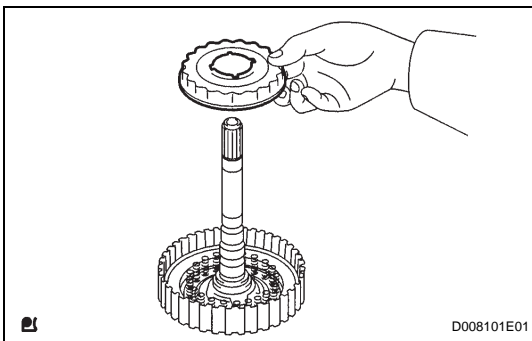
**SST 09387-00020**

(b) Using a snap ring expander, remove the snap ring from the direct clutch drum.

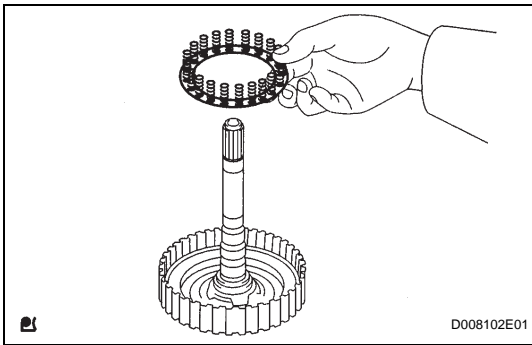
**HINT:**

- Stop the press when the spring sheet is lowered to the place 1 to 2 mm (0.039 to 0.078 in.) from the snap ring groove.
- This prevents the spring sheet from being deformed.
- Do not expand the snap ring excessively.

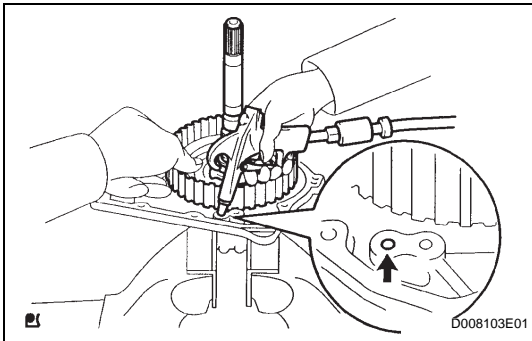
(c) Remove the clutch balancer from the direct clutch drum.



AX



- (d) Remove the piston return spring from the direct clutch drum.



- (e) Install the direct clutch drum on the transaxle rear cover.  
 (f) Holding the direct clutch piston with your hand, apply compressed air (392 kPa, 4.0 kgf/cm<sup>2</sup>, 57 psi) to the transaxle rear cover to remove the direct clutch piston.

## 5. INSPECT DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY (See page [AX-235](#))

## INSPECTION

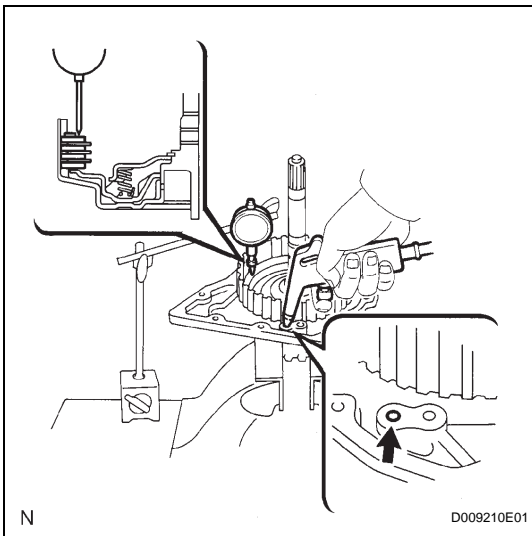
### 1. INSPECT PACK CLEARANCE OF DIRECT CLUTCH

- (a) Install the direct clutch and needle roller bearing on the transaxle rear cover.  
 (b) Using a dial indicator, measure the direct clutch pack clearance while applying and releasing compressed air (392 kPa, 4.0 kgf/cm<sup>2</sup>, 57 psi).

#### Standard pack clearance:

**0.605 to 0.825 mm (0.0238 to 0.0325 in.)**

If the pack clearance is not as specified, inspect the discs, plates and flange.

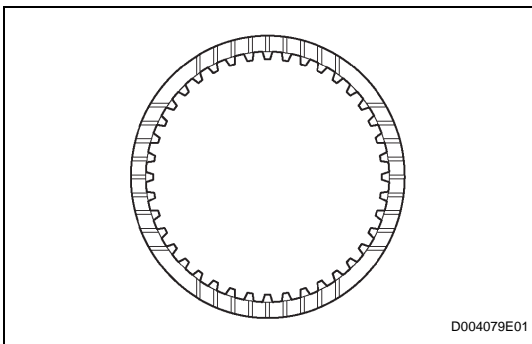


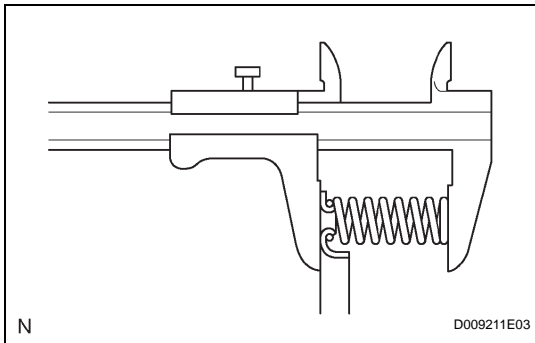
### 2. INSPECT DIRECT MULTIPLE DISC CLUTCH DISC

- (a) Check to see if the sliding surface of the disc, plate and flange are worn or burnt. If necessary, replace them.

#### HINT:

- If the lining of the disc is peeling off or discolored, or even if a part of the printed mark is defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least 15 minutes.



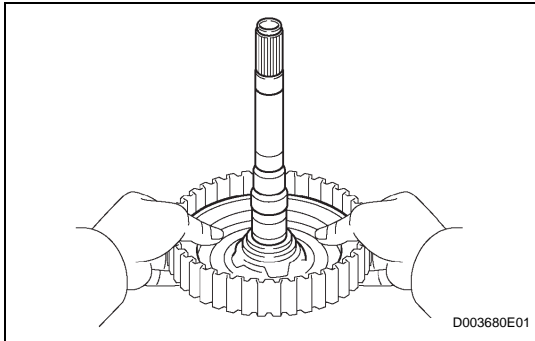


### 3. INSPECT DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY

- (a) Using a vernier caliper, measure the free length of the spring together with the spring seat.

**Standard free length:**

**22.58 mm (0.8890 in.)**



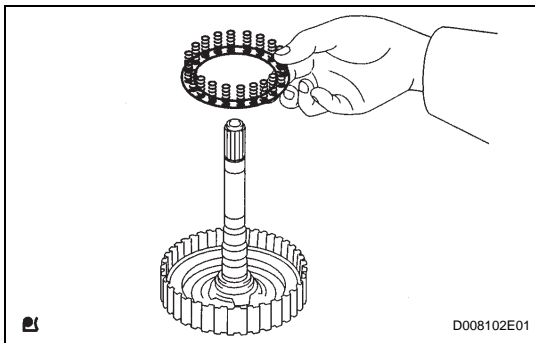
## REASSEMBLY

### 1. INSTALL DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY

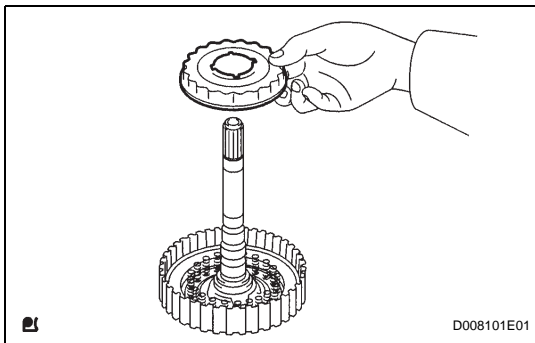
- (a) Coat the direct clutch piston with ATF, and install it to the direct clutch drum.

**NOTICE:**

**Be careful not to damage the lip seal of the direct clutch piston.**



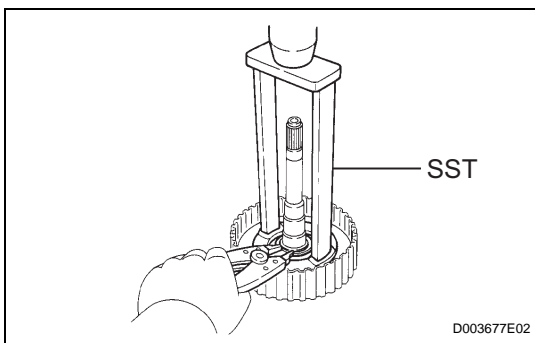
- (b) Install the piston return spring to the direct clutch drum.



- (c) Install the clutch balancer to the direct clutch drum.

**NOTICE:**

**Be careful not to damage the lip seal of the direct clutch balancer.**



- (d) Place SST on the clutch balancer and compress the piston return spring with a press.

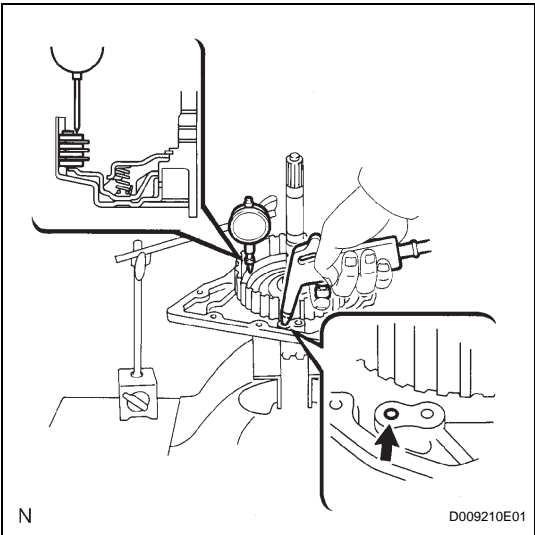
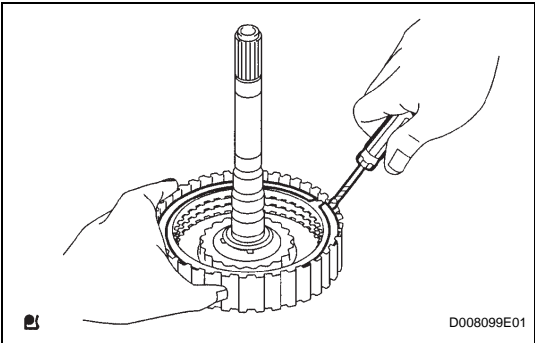
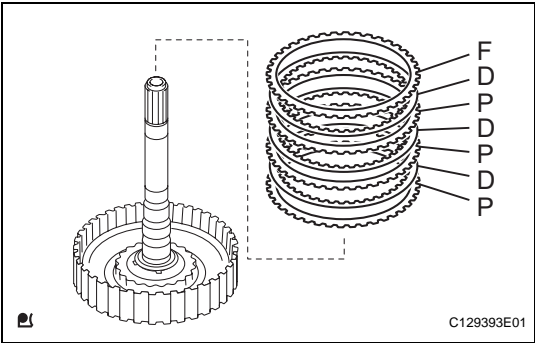
**SST 09387-00020**

- (e) Using a snap ring expander, install the snap ring to the direct clutch drum.

**NOTICE:**

- **Be sure the end gap of the snap ring is not aligned with the clutch balancer claw.**
- **Stop the press when the spring sheet is lowered to the place 1 to 2 mm (0.039 to 0.078 in.) from the snap ring groove.**

AX



- This prevents the spring sheet from being deformed.
- Do not expand the snap ring excessively.

**2. INSTALL DIRECT MULTIPLE DISC CLUTCH DISC**

(a) Install the 3 plates, 3 discs and flange.

**Install in order:**

**P - D - P - D - P - D - F**

**HINT:**

P = Plate

D = Disc

F = Flange

- (b) Using a screwdriver, install the snap ring.
- (c) Check that the end gap of the snap ring is not aligned with one of the cutouts.

**3. INSPECT PACK CLEARANCE OF DIRECT CLUTCH**

- (a) Install the direct clutch on the transaxle rear cover.
- (b) Using a dial indicator, measure the direct clutch pack clearance while applying and releasing compressed air (392 kPa, 4.0 kgf/cm<sup>2</sup>, 57 psi).

**Standard pack clearance:**

**0.605 to 0.825 mm (0.02382 to 0.03248 in.)**

If the pack clearance is less than the minimum, parts may have been assembled incorrectly, so check and reassemble again.

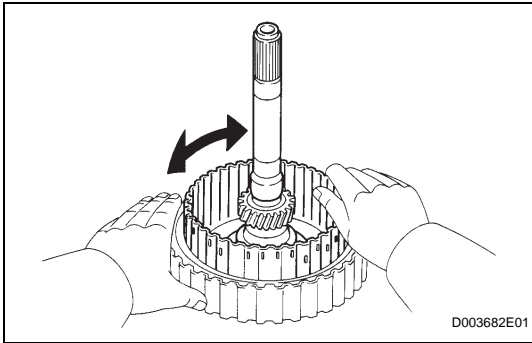
If the stroke is not as specified, select another flange.

**HINT:**

There are 6 flanges in different thickness.

**Standard flange thickness**

No.	Thickness	No.	Thickness
1	3.0 mm (0.118 in.)	4	3.3 mm (0.130 in.)
2	3.1 mm (0.122 in.)	5	3.4 mm (0.134 in.)
3	3.2 mm (0.126 in.)	6	3.5 mm (0.138 in.)



#### 4. INSPECT DIRECT MULTIPLE DISC CLUTCH CLUTCH DISC

- (a) Inspect the clutch disc rotation.
  - (1) Check that the disc rotates when rotating the disc after inserting the rear planetary sun gear.

**NOTICE:**

**Do not place the rear planetary sun gear in a vise.**

AX